

## DRAFT

# Chapter 2: Overview of Business Planning for Transportation Management Centers

### Chapter Purpose and Objectives

This chapter provides an overview of what TMC business planning involves and what benefits will result from developing a business plan. Essentially – why do one? Business Planning concepts, strategies, and examples from the private sector are introduced, which provides a basis for describing how the process could be applied to a TMC business plan. This chapter introduces the key components of a TMC Business Plan, with greater detail provided in the subsequent chapters.

### Key Messages/Themes:

Long-term system operations is fast becoming a priority focus area for many transportation agencies, and leveraging and protecting the investment agencies have made in Intelligent Transportation Systems (ITS) so that they will remain a vital traffic management tool requires careful and proactive planning. A Transportation Management Center (TMC) is the hub of a regional system, and often the TMC functions in many capacities, ranging from overall system operations to traffic and incident management, and even as the nerve center for state as well as local operations, travel information, regional emergency management, and system maintenance. With TMCs evolving into such vital elements of a region's transportation system, how can resources be targeted to achieve the desired results? How can future resource needs be projected and planned for? What are the options for organizing management functions and personnel?

### Key Topics and Issues to be Covered:

- Provides an example of private-sector oriented business plan outline and how this can be applied to a TMC Business Plan
- Discusses how business planning can be applicable at key stages in a TMC life cycle, including new TMC initiatives, sustaining operations, and evolving and expanding TMCs, including the benefits of business planning at these milestones

### How This Chapter Relates to Other Chapters:

This chapter provides background and context for Business Planning principles and guidelines, including the core components of a TMC Business Plan. By introducing business planning principles and core elements of a business plan, this chapter sets the stage for subsequent chapters that provide more detail on how to develop specific sections of the TMC Business Plan.

### Remaining Sections

- 2.1 What is a TMC Business Plan and Why Do One
- 2.2 Core Components of a TMC Business Plan
- 2.3 When to Develop a TMC Business Plan
- 2.4 Who Should Be Involved in the Business Plan
- 2.5 Relationship to Other ITS Planning, Plans and Processes
- 2.6 How the TMC Business Plan Relates to Other Agency Plans/Programs (non-ITS)

**The Business Plan is a plan for executing the long-range vision and goals of a TMC with particular emphasis on financial sustainability.**

## **2.1 What is a TMC Business Plan and Why Do One?**

Public agencies that are planning, implementing, or managing ITS programs are very familiar with ITS Strategic Plans, ITS Architectures, Concepts of Operation, and Operations Plans. These plans help to guide ITS deployment and implementation, and provide a sound basis and vision for long-range project-level or broader region (or statewide) implementations.

Within the last decade, many agencies and regions have shifted from an ITS infrastructure deployment focus, to an approach that now also factors in integration and sustaining operations. Key to this approach is the functionality, viability, and sustainability of the TMC, which often serves as the 'hub' of a local, regional or statewide ITS program.

To maintain or enhance this valuable resource, and ensure that it remains a vital part of the overall ITS infrastructure program, a business-based planning approach is needed.

A TMC Business Plan is a plan for executing the long-range vision and goals of a TMC with particular emphasis on ***financial sustainability***.

Every agency or individual that manages a TMC has a vision of what they want their TMC to be and goals that they would like their TMC to accomplish. Investments are typically made, and in many cases negotiated, among multiple competing priorities, based on functional needs and with a focus on immediate and near-term management, integration, coordination, information sharing, response and other day-to-day functions. The benefits of a business plan and a business-based planning approach for the TMC is to:

- Establish TMC-specific goals and objectives;
- Identify actions, resources, timeframes and responsibilities to achieve the goals and objectives;
- Map out a funding strategy and approach that helps link ITS programs to regional objectives and funding sources, which establishes legitimacy for sustainable funding for programs, partnerships, ongoing performance monitoring and reporting; and
- Communicate and justify the TMC's role, benefits, functions, and resource requirements to policy makers, partners, and executives.

Business planning in the private sector is quite commonplace, although concept of business planning for some public agencies might seem a bit abstract. Very few agencies develop formal ITS or TMC Business Plans, although many agencies go through some of the key processes and components of business planning as part of their agency or departmental strategic planning or annual budgeting processes.

For an agency that has never developed a TMC Business Plan before, the task of developing a Business Plan may seem daunting. Furthermore, some transportation agencies may not fully understand the benefits of such an effort. It is important for agencies to realize, however, that the effort they spend developing a business plan for their TMC may be one of the best investments they could possibly make.

### **2.1.1 Business Planning Examples from the Private Sector**

While there is no one, universally accepted definition of what a business plan is or an established formula for developing a business plan, there is general consensus on what a business plan is intended to achieve:

- A description and plan for a business's future, what the business is intended to do and how it is going to be achieved.
- A tool for attracting investors, obtaining strategic business partners or alliances
- A management tool to focus on or emphasize a key business sector or specific area of operations

The business plan is usually focused on defining an objective or idea for a product or service, assessing the market conditions to support the product or service, and describing financial projections in terms of capital costs, operating costs, and expected revenues. While there is a strong emphasis on financial performance and revenue goals, the focus of a business plan in the private sector is also about the people, institutional and market conditions, opportunities, risks and decision contingencies.

Although there are no specific parameters for how long, detailed or descriptive a business plan should be, there are general guidelines for overall form and content. Business plans could range from five pages to forty five pages; how comprehensive the plan is depends largely on the nature of the subject, industry standards for what constitutes a robust business plan or could even be dictated by who the target audience is. It would be reasonable to expect that the length, level of detail and other key parameters will vary from business plan to business plan, and a business plan for a multi-million dollar product national launch will vary greatly from a business plan for a start-up real estate company.

A business plan is typically comprised of:

- An Executive Summary
- Business Description and Concept
- Marketplace Analysis
- Operational Requirements and Resources
- Financial Plan and Strategy
- Organization and Management Plan

**Figure 2-1** shows the typical components of a private sector business plan.

**Executive Summary**

- A succinct, concise summary of the key points in the business plan.
- Clearly state the business concept, financial expectations and requirements, and operations and management strategies.

**Business Description and Concept**

- Business objective, venture, idea, product or service
- Why there is a need, what will be gained by fulfilling the need
- The market that will be served
- What will be gained by fulfilling this need and how or why it will be profitable
- Current state of the business, major achievements, size of the operation or corporation, parent companies or affiliated companies, and other features of the corporate or organizational structure.

**Marketplace Analysis**

- Status of the applicable industry/field, industry trends
- The need or 'niche' the product or service will fill
- Potential customers, target audience or stakeholders
- Competition in the marketplace, including a competitive analysis and identify how will the business, product or service needs to be positioned to compete
- Key challenges or risk factors that will support (or impact) success of the business.

**Operational Requirements and Resources**

- Resources (such as technology, facilities, personnel, partners, special services) that are needed to develop and manage the product or venture
- Key steps and actions to achieving the business concept
- Key timeframes for development, implementation, roll-out and other milestones
- Marketing plan

**Financial Plan and Strategy**

- Financial objectives and needs
- Budgets and projected revenues and expenditures
- Assessment of how the product or venture should perform and profit (break even analysis), business indicators
- Current financial status and resources
- Proposal to obtain new or additional financing
- Risk assessment

**Organization and Management Plan**

- People and personnel, including management and other key staff
- Partners and other affiliates
- Organization structure, roles and responsibilities of the key players and partners involved

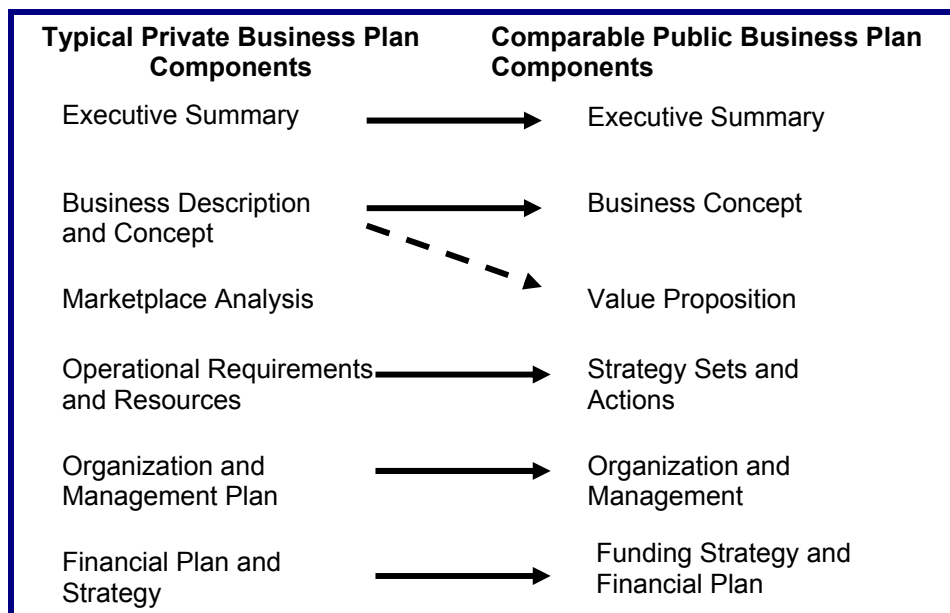
**Figure 2-1: Business Plan Components (Private Sector)**

### 2.1.2 Applying Business Planning Concepts to TMCs

So why should these principles be considered as part of TMC planning, and how can they be applied in the public sector?

It is important to note that there is not always a linear translation from a private sector business plan to one that would be appropriate for the public sector. That is, the focus of a business plan that would be developed for a product, service, or business venture may not be applicable or even appropriate in the context of developing a business plan for a TMC. However, there are principles and methods used in business planning that TMC managers and agency executives can draw upon to develop a sound, pragmatic, and comprehensive business-based approach to planning for TMCs.

**Figure 2-2** maps typical business planning principles and components from the private sector to a model suitable for a public-sector focused TMC Business Plan.



**Figure 2-2: Mapping Business Plan Components**

What public agencies can derive from private business planning practices are:

- a business-based approach to planning for the long-term sustainability and justification of the TMC;
- a functional assessment of priorities, resource needs, agency and partner roles;
- funding requirements and a funding strategy that looks beyond infrastructure-specific deployments and focus on implementing, sustaining or expanding operations in line with an established vision and business concept; and
- business planning processes and principles to demonstrate and justify the value of the TMC to the organization, how it supports higher agency goals, and the relationship of the TMC to the overall transportation management strategy – in other words, to justify the continued investment in the TMC among competing priorities.

In this context, the TMC Business Plan provides critical path information to internal leadership, to other agencies, and potential partners about the TMC's goals, plans, and objectives.

Applying these business planning principles and the business planning process will help TMC managers to:

- Establish a jointly agreed upon plan to address identified challenges, separate from other ITS and business planning efforts where the TMC is one component of a larger agency or regional program agenda;
- Define the specific operational roles and functions that the TMC fulfills, as well as a vision for what operational role it should fulfill with the right resources and systems available and in place;
- Analyze strengths, weaknesses, opportunities and threats (SWOT Analysis) to provide a realistic view of what can be achieved and the challenges or barriers that must be overcome;
- Implement a mechanism whereby actions and critical path items are regularly monitored to assess progress toward achieving the established goals, as well as progress toward realizing the overall Business Concept;
- Identify the benefits and 'payoff' expected to be achieved, including near-term and longer term scenarios, agency-specific benefits and value, as well as the benefits to the broader regional context;
- Outline the funding requirements and financial strategy, which provides a basis for future budget planning;
- Develop comprehensive and function-based requirements for the needed partnerships, organization and management structure, and personnel needs; and
- Justify and 'sell' the benefits and functions of a TMC as a critical asset of a broader TMS or regional approach to transportation, safety, connectivity, and integration.

**The TMC Business Plan is intended to provide critical path information to internal leadership, other agencies, and potential partners.**

## 2.2 Core Components of a TMC Business Plan

While there is no one specific formula for developing a business plan, TMC managers can borrow business planning concepts and strategies from private enterprise to outline a vision and build a case for continued (or future) support of TMC activities, functions and initiatives.

There are six core components that should be included as part of a TMC Business Plan, as shown in **Table 2-1**. Depending on circumstances, such as a single agency TMC or one that serves multiple functions within a region, the content could be streamlined, enhanced, or expanded. Timing and other regional priorities also could have an impact on the overall approach and content for the business plan. These core elements provide the framework for a succinct and direct business case that can be shared with agency managers, elected officials, partner agencies, and private citizens. Subsequent chapters in this handbook address each component in more detail, including methods to develop these sections, examples from other agency plans, and recommended approaches.

**Table 2-1: TMC Business Plan Core Components**

<b>TMC Business Plan Core Component</b>	<b>Recommended Content and Focus</b>
<b>Executive Summary</b>	<ul style="list-style-type: none"> <li>Summarizes the key points of the, Business Concept, Strategies, Partnerships, Organization and Financial Plan.</li> <li>Used as a tool to sell the Business Concept and Plan to high-level agency managers, local and regional elected officials, and TMC partners.</li> </ul>
<b>The Business Concept</b>	<ul style="list-style-type: none"> <li>Functions and description of key functions or needed functions</li> <li>Strategic objectives, goals, future trends</li> <li>Services – within the TMC and how the TMC relates or supports other agency operations and regional TMS, emergency management, safety, regional connectivity, information management, etc.</li> <li>Vision and TMC description (current state, future end state)</li> <li>Partnerships, including existing and desired or needed partners or alliances</li> <li>Risks and dependencies</li> </ul>
<b>Value Proposition (what's the payoff?)</b>	<ul style="list-style-type: none"> <li>Define benefits and how they will be measured, how progress will be monitored and reported</li> <li>Who benefits – who stands to benefit from achieving strategic objectives</li> <li>The Value Proposition helps to market and “sell” the Business Concept to target audience and decision makers</li> </ul>
<b>Strategy Sets</b>	<ul style="list-style-type: none"> <li>Actions – What needs to happen (projects, implementations, changes or enhancements that need to occur)</li> <li>Who is responsible (to lead, champion, produce, develop, implement or manage)</li> <li>Timeframes and priorities</li> <li>Dependencies</li> </ul>
<b>Organization and Management Structure</b>	<ul style="list-style-type: none"> <li>Who owns, who manages, who participates</li> <li>Personnel, staffing (numbers and types of staff, training and experience requirements, etc.)</li> <li>Organization structure, chain of command, resource requirements</li> <li>TMC relationships to external agencies, how it functions in the ‘bigger picture’, and what are the critical agency relationships and partnerships</li> </ul>



<b>Funding Strategy and Financial Plan</b>	<ul style="list-style-type: none"> <li>• Budget and timeframes</li> <li>• Funding mechanisms</li> <li>• Funding processes</li> <li>• Procurement issues/requirements</li> </ul>
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Each of these core components is discussed in more detail in Chapters 5 through 9 of this handbook.

## 2.3 When to Develop a TMC Business Plan

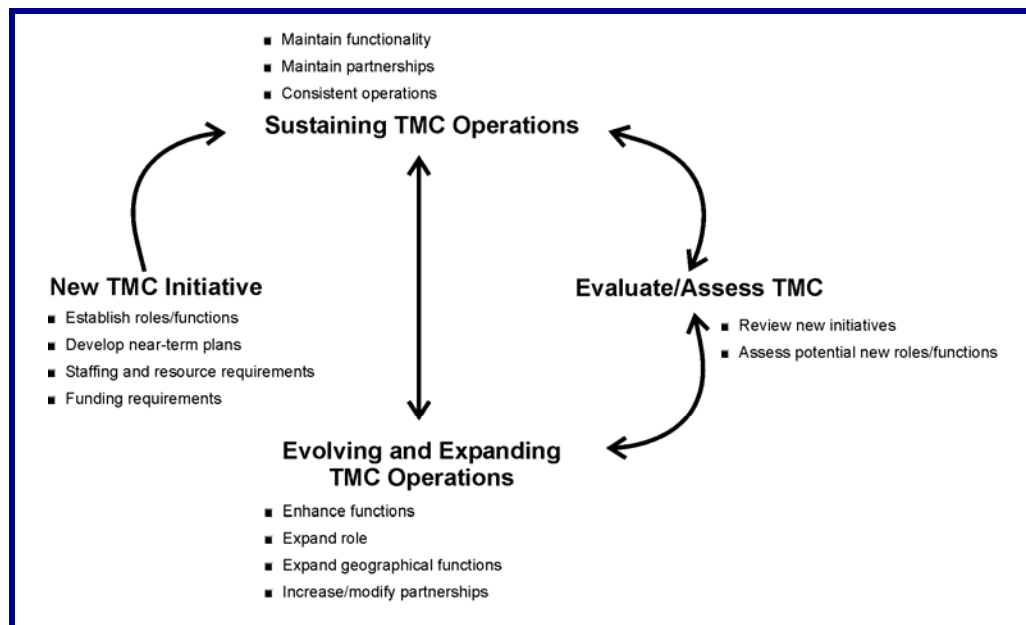
A Business Plan is relevant to all stages of the TMC life cycle including establishing a new TMC, evolution or expansion of a TMC, sustaining operations in changing environments and re-evaluating priorities. Just like business plans are prepared in a variety of scenarios in the private sector – such as for a new start-up company, to expand an existing business into new markets, or even for a major corporate merger – there is relevance in asking key questions and documenting priorities relative to strategic decisions and directions, desired outcomes, financial outlook and needs, and key partnerships that are needed to achieve the envisioned end result.

### 2.3.1 TMC Life Cycle

The state or 'phase' of a TMC usually can be classified into one of three general life cycle categories: new, sustaining or evolving. The dynamics of a TMC, and its inherent role in ever expanding operational responsibilities within any given region, means that once established, TMCs are almost always evolving, expanding their role, adapting to new technologies or processes. Even in a mode that would be considered 'sustaining', there will usually be some degree of ongoing minor enhancements or expansions.

**Figure 2-3** shows a typical 'life-cycle' of a TMC, in terms of high-level development and operating phases. Granted, TMCs will evolve, expand, or sustain relative to their geographic scope of services, functions, partnerships, and interagency dependencies and so forth. These development phases are intended to illustrate key points in the TMC evolution and life cycle process where business planning and business planning approaches can be applied and be beneficial.





**Figure 2-3: TMC Life Cycle**

To illustrate these phases and the corresponding benefits of business planning, **Table 2-2** provides examples of different TMCs and how business planning could benefit their respective life cycle stages.

**Table 2-2: TMC Phase/Business Planning Benefit Comparison**

Phase in the TMC Life Cycle	Examples	Benefits of TMC Business Plan
<b>New TMC Initiative</b>	<ul style="list-style-type: none"> <li>Nebraska DOT Statewide TMC</li> <li>FAST, Las Vegas, Nevada*</li> </ul>	<ul style="list-style-type: none"> <li>Establish functional and strategic objectives</li> <li>Outline and establish role for TMC within a geographic area, agency or consortia of agencies</li> <li>Near-term plan for staffing, operations and maintenance funding needs</li> <li>Establish institutional dependencies and partnerships</li> <li>Identify funding requirements and priorities</li> </ul>

Phase in the TMC Life Cycle	Examples	Benefits of TMC Business Plan
<b>Evolving/Expanding TMC</b>	<ul style="list-style-type: none"> <li>City of Tucson*</li> <li>Minnesota DOT*</li> </ul>	<ul style="list-style-type: none"> <li>Update and expand strategic objectives (technical, institutional, functional)</li> <li>Establish priorities</li> <li>Expand role and functions</li> <li>Expand partnerships</li> <li>Develop strategic staffing plan</li> <li>Identify funding needs and appropriate funding mechanisms</li> </ul>
<b>Sustaining Operations</b>	<ul style="list-style-type: none"> <li>Arizona DOT</li> <li>INFORM, Long Island, NY*</li> </ul>	<ul style="list-style-type: none"> <li>Confirm operational responsibilities and objectives</li> <li>Maintain current institutional relationships and partnerships</li> <li>Assess sustaining role against other agency objectives, directives, or outside agency initiatives</li> <li>Align business plan with other operational plans</li> </ul>
<b>Re-Evaluation of Plans</b>	<ul style="list-style-type: none"> <li>Caltrans TMC Planning Initiatives*</li> </ul>	<ul style="list-style-type: none"> <li>Assess how TMC is functioning relative to expectations and objectives</li> <li>Assess how changing agency priorities and objectives need to be addressed as part of TMC operations</li> <li>Compare new operational roles, systems or functions with current capabilities</li> <li>Adjust timeframe of staffing and other resource needs based on shifting priorities or expanded TMC responsibilities</li> <li></li> </ul>

\* These TMCs are highlighted in the Case Studies contained in Chapters 11 through 15 of this handbook

## 2.4 Who Should Be Involved in the Business Plan

Developing a sound TMC Business Plan relies on having input, guidance and championing of the process from the right *institutional* partners, as well as the right *individual* partners. Stakeholders have a key role at many levels of the Business Plan development process, and defining the stakeholders and the target audience early in the process will help to garner the right involvement at the right stages.

When embarking on a business planning effort, it is important to identify three key stakeholder groups:

- those who need to be involved in developing the TMC Business Plan;
- those who need to provide input to the Plan, and
- those who ultimately need to approve, support, or champion the plan and its vision.

The breadth of participants will likely expand beyond transportation, although depending on the maturity level and functionality of the TMC, primary operational stakeholders will typically be transportation oriented. Some stakeholders will have more of a vested interest in the TMC than others; this is largely a result of owning agency, geography, and overall functionality of the TMC. The following outline the types of stakeholders that could be expected to provide input to the business planning process:

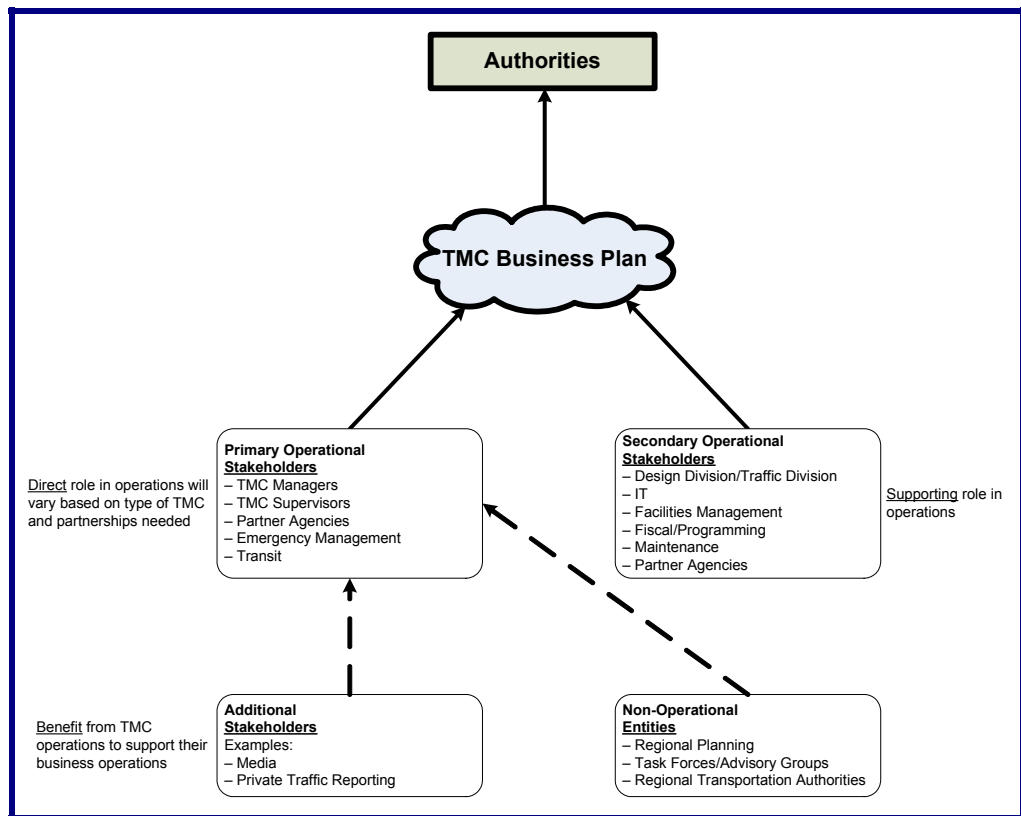
**Primary operational stakeholders** could include state, cities, county, regional transportation, emergency management agencies, law enforcement, public safety, transit, and others depending on level of coordination for operations. These stakeholders have a direct and integral role in operations, either through data exchange, collocation, or other arrangements.

**Secondary operational stakeholders**, although not having a direct role in operations in the TMC, provide supporting services necessary to carry out TMC functions, or utilize outputs and information gathered from the TMC as part of their functions. These could include design or IT departments, maintenance, and others. These secondary operational stakeholders could provide input as to specific considerations, processes, or protocols that would need to be reviewed or incorporated as part of the business planning process.

**Additional stakeholders**, such as media, private traffic reporting firms, and others potentially benefit from information and outputs from the TMC to support their business practices, but in most cases do not make significant operational contributions to the TMC. Depending on the function and role of a TMC, these additional stakeholders also could include transit, law enforcement, and other agencies.

Parties with a vested interest, such as MPO/regional transportation planning authority, citizen's advisory groups, and others that are not directly involved in operations, but could provide input as to how the Business Plan needs to align with other regional planning efforts or initiatives should be included as part of the stakeholder involvement.

**Figure 2-4** shows the inputs and relationships of these stakeholder groups as they pertain to a business planning process.



**Figure 2-4: Stakeholder Involvement in the TMC Business Plan**

When looking at potential stakeholders, including those that need to develop, provide input and ultimately approve or carry the Business Plan forward, these will most likely be dictated by geography, institutional relationship, or organization, and by specific discipline.

#### 2.4.1 Geographic Range and Considerations

From a geographic perspective, the coverage area of the TMC needs to be considered on a range of levels, but for business plan development purposes, it is important to consider the geographic area served as well as geographical areas that have (or will have) a vested interest or dependency on the TMC.

For example, a city that establishes a TMC will likely need to involve key city departments such as traffic/streets/public works, asset management, maintenance, information technology, public safety and risk management from within their city departments. The area served by that city TMC is typically limited to established geographic boundaries and a well-defined jurisdiction. That city TMC might need to factor in outside interests if there are relationships with neighboring cities or regional entities that would warrant input as to the TMC functions or services (e.g., coordinated traffic signals along corridors that traverse multiple jurisdictions, freeway/arterial interchange coordination, maintenance agreements among neighboring jurisdictions, etc.). A recent example is the Maricopa County Department of Transportation TMC Implementation Plan, where stakeholders from

**Geography, institutional relationships, specific organizational structures and disciplines will factor in to which stakeholders should be participating in the business planning process.**

MCDOT, Arizona DOT, Flood Control District, select cities in the County area, as well as various departments within the County were invited to provide input to the long-range vision for the County's TMC.

A statewide or multi-agency TMC, however, would need to involve additional jurisdictions that broaden the geographic scope, as those interests would also need to be represented and accounted for in the TMC's overall function and operations. While there may be a 'lead' agency in terms of management, funding or operations, or facility management, additional stakeholders could have key roles in providing input to the strategic objectives. Chapter 4 of this Business Planning and Plans Handbook provides more information about the various TMC business models and institutional relationships.

### 2.4.2 Organizational Considerations

With the geographic area, or areas, identified, the right participants from within that area must be identified and engaged in the process.

Some of the key stakeholders can be provided, at least partially, through other planning processes, such as a regional ITS architecture, concept of operations, capital or long-range transportation program, or individual agency strategic plans. A Regional ITS Architecture in particular, provides a useful framework for stakeholder identification because of its regional scope as well as its focus on existing and desired functional relationships among entities within a region.

The lead agency in developing the TMC Business Plan will need to factor in the organizational structure and climate of their own agency, and work within established processes and protocols in terms of what divisions, offices, or branches would need to be involved. It is important to note that the Business Planning process, with its emphasis on fiscal and resource issues and planning, should get participation and input from divisions within their organization that would need to be involved in such decisions or strategic directions. These could include facilities management, asset management, programming or capital improvements and others as appropriate. When multiple agencies are involved, this could extend to additional divisions or offices within the partnering agencies.

### 2.4.3 Involving Discipline-Specific Perspectives

Operational functions and specialties for a TMC can range many disciplines, and to the extent practical and feasible, these disciplines should be considered as part of the business planning process. Subsections 2.4.2 and 2.4.3 emphasized involving key institutions and institutional partners in the process; their participation will help to ensure that the business plan includes input (and hopefully support) from a range of internal and external entities. It will be essential for those developing the TMC Business Plan to identify the specific perspectives that might not be represented among the 'top tier' of operational stakeholders, and engage their input or involvement in the process. By identifying how these other stakeholders are impacted by or interact with the TMC, its components, its operations, etc., additional perspectives can be included in the process.

Some of these additional perspectives could include (as applicable, and as appropriate to a specific TMC scenario):

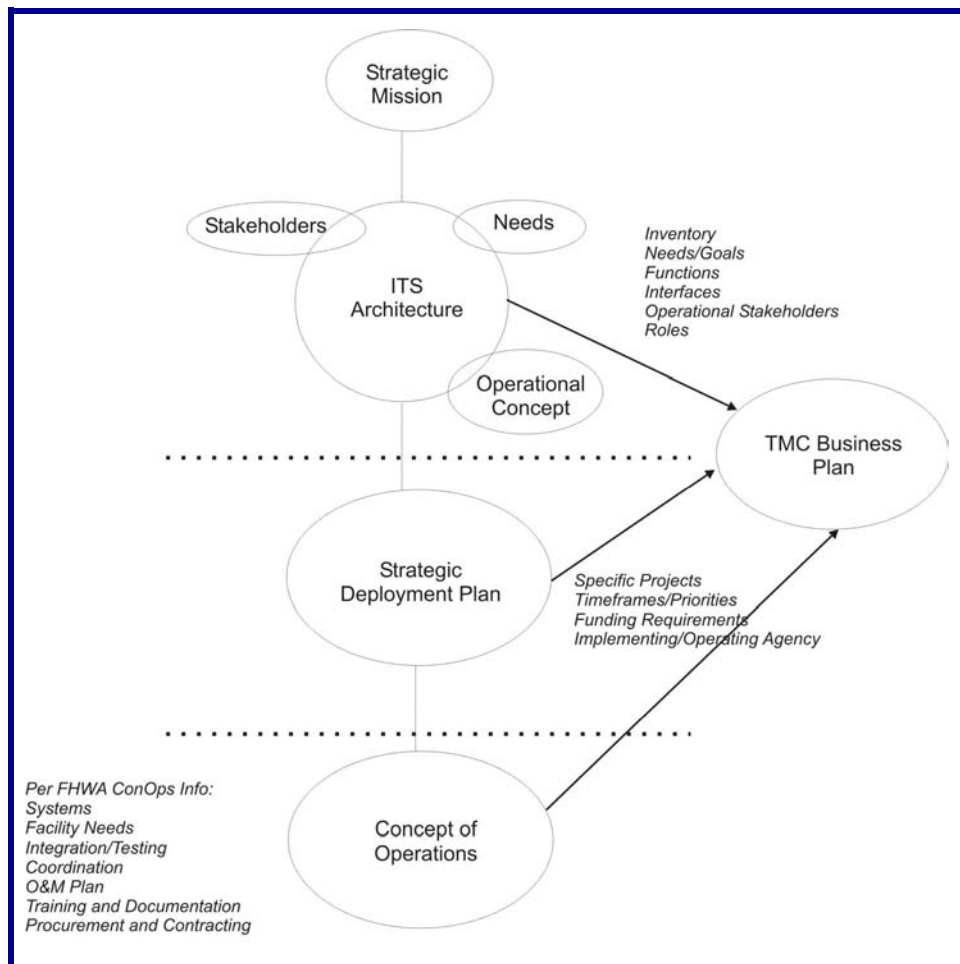
**Each organization will have specific disciplines or other supporting resources that could provide valuable input to the Business Plan.**

- Information technology;
- Maintenance;
- Facilities management;
- Accounting/programming;
- Law Enforcement/CAD Dispatch not collocated in TMC;
- Other modes (such as transit, ferry);
- Private entities, including media, traffic reporting firms, etc.;
- Regional or metropolitan planning organizations; and
- Citizen advisory or advocacy groups.

## **2.5 Relationship to Other ITS Planning, Plans and Processes**

One of the greatest values of the TMC Business Plan is its role in helping agencies link ITS programs to regional objectives and funding sources. This is what separates the TMC Business Plan from other agency planning processes, such as a regional ITS architecture, Concept of Operations or non-ITS plans that have a broader regional impact.

Agencies, and even regions, with established or new ITS programs are responsible for planning, implementing and integrating technologies and systems in a responsible manner, and one that considers the broader impacts and vision beyond individual deployments. Business planning, although not traditionally among the core ITS plans developed, draws upon outputs from the other ITS planning processes, as well as complement those other processes. **Figure 2-5** shows the relationship and inputs of the various ITS planning processes with the TMC Business Plan. The remainder of this section looks at these relationships in more detail.



**Figure 2-5: Relationship of ITS Planning Processes with the TMC Business Plan**

If properly developed and implemented, the TMC Business Plan can establish legitimacy for sustainable funding, near-term needs of the TMC as well as longer-term programs and partnerships through ongoing performance monitoring and reporting of outcomes. In this way, it is a valuable tool for communicating with policy makers, partners, and executives.

### 2.5.1 Regional ITS Architecture

Regional ITS architectures that are developed based on the FHWA Final Rule and FTA Final Policy requirements provide a substantial baseline of information relative to the overall vision, role and function of a TMC. Specifically, the architecture provides the following key outputs that can be used to support or develop the TMC Business Plan:

- **Stakeholders** – who are the key players (public and private), what is their operational role, in what capacity do they function in relation to ITS services and functions



- Needs – the process to develop a regional ITS architecture results in priority needs from a variety of perspectives, including traffic and emergency management, transit, data/information management, and others.
- Functions and interfaces – The ITS architecture also outlines key functions and interfaces for a variety of systems and centers within an region and how they need to interface. Key functions and the role of the TMC can be derived based on the architecture outputs.
- Operational Concepts – how key systems and stakeholders are envisioned to function to achieve desired goals/vision. The operational concept outlines the operational responsibilities and implementation and maintenance roles of each partner and can be used to gain consensus on the foundation of the TMC Business Plan by clearly defining the expectations and partnerships relative to the TMC.

### **2.5.2 Strategic Deployment Plan**

A strategic deployment plan provides more specific information about projects, timeframes for implementation as well as project priorities and sequencing. Strategic deployment plans also typically include planning-level funding requirements and responsible agency(ies). A strategic deployment plan can provide valuable input to a region's long range plan and transportation improvement plan. Likewise, a strategic deployment plan can assist in budgeting for necessary for program management, project development and ITS planning in agencies' overall work programs.

Components of a strategic deployment plan can be applied to the TMC Business Plan to provide more detailed understanding of cost and resource requirements and how they impact the TMC, as well as anticipated timeframes for implementing specific projects or strategies in which the TMC will play a key role.

### **2.5.3 Concept of Operations**

A Concept of Operations defines, in more detail than a high-level Operational Concept found in a Regional ITS Architecture, the specifics of how a particular project or system operates in different scenarios. It would describe not only the roles and responsibilities, but operational scenarios for how a system operates on a day to day basis or in certain circumstances and interactions and data sharing for a project. A Concept of Operations is part of a project-oriented systems engineering approach that enables later validation of the concept of what the system was meant to do (in addition to system testing to ensure that the system meets the specific requirements that were laid out).

The Concept of Operations for a TMC would be developed using input from the Regional ITS Architecture's Operational Concept by utilizing applicable components to further define and refine the specific concept for the TMC's operations.

The Concept of Operations would provide input to the TMC Business Plan in terms of specific partners and roles, and can be expanded to define business processes and operations, management, and maintenance funding structures if applicable. The Concept of Operations would also provide a breakdown of various aspects of the TMC that should be addressed by the Business Plan and later tracked against the plan (and the plan revised as appropriate) related to actual expenditures and performance.

## **2.6 How the TMC Business Plan Relates to Other Agency Plans/Programs (non-ITS)**

In addition to ITS planning processes, which will have a direct impact on the TMC, there are other plans that will need to be factored or considered as part of the business plan. These are often 'bigger picture' plans and strategic objectives can help further the business case for a TMC. In this regard, considerations for how TMCs help to support these broader goals and objectives focused on safety, mobility, efficiency, or agency strategic objectives need to be included as part of the business planning process.

- Agency strategic goals and strategic plans
  - Higher level, strategic missions. Typically these are very succinct goals 'from the top'.
  - Often broader than ITS and represent comprehensive interests beyond operations. Need to align or demonstrate how TMC fits in to these goals and strategic objectives, and more importantly, how TMC supports strategic agency objectives
  - Align with asset management programs
- Statewide and Metropolitan Planning Organizations' Transportation Improvement Plans/Programs
- Statewide transportation plans and transportation investment plans
  - Where are the priority projects/programs, and how current and future TMC operations fit in with those priorities
- State, county, and possibly city emergency plans
  - How current and future TMC operations fits in the context of established or developing emergency plans
  - Interfaces between TMC and emergency services